



Air Force Research Laboratory|AFRL

Science and Technology for Tomorrow's Air and Space Force

Success Story

MS. KATHLEEN ROBINETTE RECEIVES AWARD FOR WOMEN IN GOVERNMENT



The Award for Women in Government from *Good Housekeeping* magazine and the Center for American Women and Politics recognizes life-changing achievements made by women in government. Ms. Kathleen Robinette's work in the Civilian American and European Surface Anthropometry Resource (CAESAR) program has tremendous value for the Air Force and civilians by providing accurate three-dimensional (3-D) human models and body measurement data for the improved design of systems, equipment, and clothing.



Air Force Research Laboratory
Wright-Patterson AFB OH

Accomplishment

Ms. Robinette, a Human Effectiveness Directorate anthropologist, recently received the Award for Women in Government from *Good Housekeeping* magazine and the Center for American Women and Politics for her work in the CAESAR program during a ceremony in Washington DC at the Library of Congress. The award recognizes Ms. Robinette's individual accomplishment and serves as a tribute to the hardworking, dedicated scientists within the directorate.

Background

Ms. Robinette, Director of the directorate's Computerized Anthropometric Research and Design Laboratory, pioneered technologies, such as the first human head scanner and a whole-body scanner, that helped launch CAESAR as the first successful 3-D surface anthropometry survey. The survey obtained body measurements of 4,431 civilians, 18 to 65 years old, from the United States, The Netherlands, and Italy—countries whose populations are among the largest, tallest, and shortest in the North Atlantic Treaty Organization, respectively.

CAESAR removes the guesswork in human physical measurement with 3-D scanning. Since people are 3-D, as are the products that people use and wear, 3-D is vital in design. Traditionally, however, researchers used one-dimensional (1-D) body measurements, such as chest circumference, waist circumference, and arm length, to create 3-D human models; no other way existed to create the whole person in 3-D.

CAESAR provides over 13,000 3-D electronic human models as well as 99 traditional, 1-D body measurements. More accurate 3-D models save time and money formerly spent making 3-D models from 1-D data.

With the capability to improve product designs, CAESAR allows researchers to design and tailor systems and equipment in order to accommodate different body shapes and sizes.

Military troops could not only share equipment more readily, but also could have customized clothing and supplies for enhanced safety and performance. Likewise, industry could use CAESAR as an effective, efficient way to design and manufacture products, such as automobiles, airplane seats, furniture, sports equipment, clothing, or artificial limbs, that better fit the variability of body shapes and sizes.

Additional information

To receive more information about this or other activities in the Air Force Research Laboratory, contact TECH CONNECT, AFRL/XPTC, (800) 203-6451 and you will be directed to the appropriate laboratory expert. (02-HE-14)